**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
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OCT 2 5 2005

Ref: 8EPR-SR

Lisa Farrell
City of Denver
Department of Environmental Quality, Division of Environmental Quality
201 W. Colfax Ave. Dept. 1009
Denver, CO 80202-5332

Dear Ms. Farrell:

EPA approves the proposed changes by the City of Denver to the VB/I70 Superfund Site, Operable Unit 02, QAPP/SAP. This QAPP/SAP was originally prepared by EnviroGroup. I have attached a copy of the City of Denver's comments to this approval letter.

Please contact me with any further questions regarding this approval letter. My phone number is 303-312-6578.

Sincerely,

Victor Ketellapper
Project Manager

cc: Barbara O'Grady, CDPHE

**COPY**

# City of Denver, Department of Environmental Health
# CHANGES/COMMENTS to the VB/I-70 SUPERFUND SITE QAPP/SAP originally prepared by EnviroGroup in November 2004.
# October 24, 2005

## QUALITY ASSURANCE PROJECT PLAN

Pg 1 Section A4 – Add a reference and description of the City and County of Denver Project Manager, Lisa Farrell, and update references to EnviroGroup and ASARCO to accurately describe personnel changes.

Pg. 4 second full paragraph – the reference to "Drawing 1 " is incorrect. The correct reference is "Figure A-2".

Pg 36 last paragraph – the reference to "Figure B-2" is in error, the correct reference should be "Figure B-1"

Pg 38 Section B1.3 Sediment Sampling – We will collect sediment samples by using disposable plastic scoops to collect sample from the first inch or two of the stream bed Equipment blanks will not be necessary as gloves and scoops are disposed after each location. The sample will be composited in a bowl prior to filling the bottles. The sediment samples will be collected from a location where there are obvious fines accumulated in the stream bed to ensure adequate sample volume.

Pg 38 fourth full paragraph – the reference to "Figure B-2" is in error. The correct reference is "Figure B-1".

Pg 39 – Table at bottom of the page (Stations for Groundwater Sample collection), remove the reference to groundwater well MW-04 since it was never drilled. Water levels will be obtained from the four coliseum perimeter wells.

Pg 44 – last paragraph in the Sample Handling, Chain of Custody, and Sample Shipment section – Instead of the EnviroGroup Limited Project Manager, the City and County of Denver Project Manager (Lisa Farrell) should be notified.

Pg 44 "Record Keeping"– a description of the required pen type and the method for error correction will be added ("All forms and sample labels will be filled out using a ball-point pen with black ink (no Sharpies). If an error is made, the error will be crossed out with a SINGLE line and initialed and dated by the author.").

Pg 45 Analytical Method Requirements – EPA Method SW-846 6010B (ICP) may not provide low enough detection limits to provide useful data for surface water samples collected in-stream. It has been our experience that levels of the targeted metals detected in samples collected near the smelter are typically lower than the limits achievable by the proposed method. Since EPA Method SW-846 6020B (IC/MS) is recommended for arsenic and cadmium, we will use EPA Method SW-846 6020B to obtain suitable detection levels for all analytes (arsenic, cadmium, copper and lead).

P 46 – last paragraph describing "Field Blanks" – A field blank will be prepared in the field once per sampling event for both total and dissolved metals. To collect the field blank for total metals, a one liter poly bottle pre-preserved with $HNO_3$ will be opened and filled with DI water, then closed and sealed and submitted to the laboratory with the other samples for "blind" analysis. To collect the field blank for dissolved metals, DI water will be run through the peristaltic pump and 0.45 μ filter into a one liter poly bottle pre-preserved with $HNO_3$. The sample will be submitted "blind" to the laboratory for analysis with the other samples.

Pg 47 – one Performance Evaluation (PE) sample for each media will be included with the samples collected every quarter. The samples will be prepared and provided by EPA and submitted as blind samples for analysis.

Pg 80 Table B-6. – Since we are using disposable sampling equipment to collect the sediment samples, equipment blanks will not be necessary.

**ATTACHMENT D – STANDARD OPERATING PROCEDURES**

Pg 10 Dissolved Metals – Samples for dissolved metals analysis will be field filtered directly into a one liter poly bottle container pre-preserved with $HNO_3$ then cooled to 4 ° C for transport to the laboratory.

Pg 12 Section 4.0 Surface Water Investigation Procedures – as mentioned in the QAPP Section B1-1 (see above), we will collect sediment samples using a disposable scoop to collect sediment from the first inch or two of the stream bed. The sample will then be composited in a bowl prior to filling the bottles. The sediment samples will be collected from a location where there are obvious fines accumulated in the stream bed to ensure adequate sample volume. Material will be sieved and composited into a glass holding container. When an adequate amount of material has been collected from three locations at the sample site, the overlying water will be poured off and the sediment transferred to a 4oz glass sample jar.

Pg 12 last paragraph – samples for dissolved metals will be field filtered directly into a one liter poly bottle pre-preserved with $HNO_3$ and cooled to 4 ° C for transport to the laboratory. Due to the high suspended solid content of the surface water, it may be necessary to use an in-line pre-filter in front of the 0.45 µ filter. Field tests will be performed to determine how to most effectively filter this matrix.

Pg 14 Decontamination of Sampling and Testing Equipment – the detergent used for decontamination should be specified as non-phosphate (such as Alconox)

Pg 14 Decontamination of Sampling and Testing Equipment – a 20% solution of nitric acid/ DI water (1:4 ratio) is too concentrated. We will use either a 10% or 1% solution that will adequately decontaminate any containers or equipment.

Pg 15 second sentence – Surface soil samples will be collected using a new disposable scoop for each collection point. Therefore, sampling equipment will not require decontamination.

Pg 16 – a) Soil , b) Waste Water - all investigation derived and sampling associated waste will be managed by the contractor in a way consistent with waste management protocols. Wastewater or soils will not be sent to the ASARCO waste water plant for treatment.

Pg 18 Section 7.1.1 Sample Labels - a description of the required pen type and the method for error correction will be added ("All forms and sample labels will be filled out using a ball-point pen with black ink (no Sharpies). If an error is made, the error will be crossed out with a SINGLE line and initialed and dated by the author.").

Pg 18 Section 7.1.3 Field Notebook and Field Forms - a description of the required pen type and the method for error correction will be added ("All forms and sample labels will be filled out using a ball-point pen with black ink (no Sharpies). If an error is made, the error will be crossed out with a SINGLE line and initialed and dated by the author.").

Pg 19 Chain of Custody Record - a description of the required pen type and the method for error correction will be added ("All forms and sample labels will be filled out using a ball-point pen with black ink (no Sharpies). If an error is made, the error will be crossed out with a SINGLE line and initialed and dated by the author.").

Pg 28 third full paragraph – specify that trip blanks are only associated with volatile organic samples.

Pg. 30 Section 8.3 Data Entry: Accuracy and Completeness – Data entry will be performed by an administrative assistant. All data entry will be verified by the Project Manager prior to finalization in the database.
Pg 31 Section 8.4 Reporting Data – The ASARCO Site Manager will not immediately be orally notified nor will the EPA RPM be orally notified within 10 days of confirmation. Data will be submitted as a .pdf file to the EPA RPM and CDPHE within one week of the data coming in. Both EPA and CDPHE will be notified of upcoming sampling events within one week of scheduled sampling. Additionally, the EPA RPM and CDPHE will receive a post event notification memo to be submitted within one week of a sample event. Data Validation Reports will be completed and sent to EPA RPM and CDPHE within 30 days of data receipt.

**ADDITIONAL NOTES:**

We can use data from the Water Quality program sampling locations near the site for comparative purposes (see location map).